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DESCRIPTION OF A NEW SONORAN SNAKE OF THE
GENUS *FICIMIA*, WITH NOTES ON OTHER
MEXICAN SPECIES.

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Our knowledge of the various species of the genus *Ficimia* is in a rather confused state due largely to the dearth of these small subterranean snakes in collections. No sufficient series is available from one locality to permit the determination of the extent of variation in a given species at a given place. I am convinced that some reported specimens have been placed incorrectly under *Ficimia olivacea* Gray, and I believe that Boulenger¹ has erred in placing *F. ornata* Bocourt, *F. publia* Cope and *Amblymetopon variegatum* Günther as synonyms of *Ficimia olivacea* Gray.

In this small, slow-moving, subterranean genus one must expect a tendency for the formation of species and subspecies occupying relatively limited areas; conditions that obtain in other subterranean genera as, for example, *Tantilla*, *Micrurus*, and *Calamaria*.

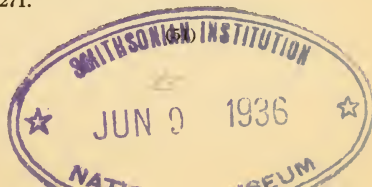
Ficimia desertorum sp. nov.

Type.—No. 385. Collected about 12 kilometers northwest of Guaymas, Sonora, July 6, 1934, by E. H. Taylor.

Diagnosis.—Snout with a transverse cutting edge strongly recurved; scales in seventeen rows, with apical pits; the rostral separated from the frontal by prefrontals only; the internasals wanting; differing from the other members of the genus in having a well developed loreal, and the anal scale single. A series of black dorsal blotches separated by cream-white spots dorsally and magenta areas laterally.

Description of the holotype.—Rostral large, with a sharp, transverse edge, somewhat upturned, leaving a hollow depression above; rostral widely separated from the frontal by a pair of large prefrontals; the common suture of these scales is three-fourths the length of the scales, the scale

¹ Cat. Snakes British Museum, 2d Ed., Vol. II, 1894, p. 271.



nearly as wide as long; frontonasals small, widely separated by the rostral, their posterior edges not extending back as far as the rostral; frontal large, its anterior angle approaching a straight line, the anterior part as wide as posterior, the posterior angle approaching a right angle; supraoculars about the same width anteriorly as posteriorly; parietals large, their length about one-fourth to one-fifth greater than that of frontal, their width equal to the length of the frontal. Character of the nasal not certainly determinable but probably fused with the first labial; a large, well defined loreal; two preoculars; two-three postoculars; temporals 1 + 3, 1 + 2; eye moderate; pupil vertically oval; seven upper labials, the sixth largest, the seventh smallest; the third and fourth labials enter orbit.

Mental small; first pair of lower labials in contact; two pairs of chin-shields, first pair large, broadly in contact, second pair small, separated by a single scale; these separated from the first wide ventral by three pairs of scales and four narrow ventrals; 23 scale rows around the anterior part of the neck; 17, 2 centimeters back of head; 17 at anus; anal single; four scales bound anus laterally; 26 paired subcaudals, and a terminal conical scale; ventrals 131. Scales all with a single apical pit. Total length 275; tail 35.

Color in life.—Dorsal surface with a series of dark bars, the median part of each quadrangular and of solid color, while on the sides, the centers of the scales are paper white and their edges black, the dark color involving fewer scale rows than on the dorsal part; thirty-four blotches on body, eight on the tail, the anterior blotches involving about four and one-half scale rows, those of the posterior part involving two and one-half or less; the dorsal areas between the blotches are cream white, while on sides the color is dull magenta; lower on side the color is yellowish; the entire ventral surface nearly white. The two anterior spots on the head and neck are united, and the snout, sides of head, and temporal region are yellowish.

Remarks.—The species is apparently most closely related to *Ficimia cana* (Cope), and *Ficimia quadrangularis* Günther, agreeing with each in having the rostral separated from the frontal by the prefrontals instead of being directly in contact as in the other members of the genus, but differing from both in having a large loreal and an undivided anal scale, characters which would seem to warrant generic definition. However, it seems wiser to redefine *Ficimia* to include the form, rather than erect a new genus, since the relationship is very obviously with the group of species now associated under that generic name.

The dorsal markings show some resemblance to *F. quadrangularis* Günther, a species known from a single specimen collected 700 kilometers to the south of the type locality of the species here described.

Ficimia olivacea Gray.

1849. *Ficimia olivacea* Gray, Cat. Snakes British Museum, 1849, p. 80. (Type description; type locality Mexico, Hugo Finck Coll. 2 types ♂. Normally no internasals; on one side one is present); Cope, Proceedings Acad. Nat. Sci., Philadelphia, 1866, p. 132 (Orizaba, Vera Cruz; Sumichrast Coll.); Bocourt, Mission Scientifique au Mexique et dans l'Amerique Central, Reptiles, liv. 9,

1883, p. 570, pl. XXXV, fig. 11; Garman, Mem. Mus. Comp. Zool., VIII, no. 3, 1883, p. 84; Günther, Biologia Centrali-Americana, Rept. and Batr., 1893 (part), p. 98, pl. XXXV, fig. B (entire dorsal view, and lateral; dorsal and ventral views of head); ? Stuart, Univ. Michigan Mus. Zool. Publ. no. 29, Oct. 1, 1935 (La Libertad, Peten, Guatemala).

1862. *Ficimia elaiocroma* Jan, Arch. Zool. Anat. Phys., II, 1862, p. 58 (ventrals 155, subcaudals 34; no internasals).

A specimen (No. 2194) was collected at Tierra Colorado, Vera Cruz, July 14, 1932, by E. H. Taylor and Hobart M. Smith. It presents the following characteristics:

Rostral sharp-edged, strongly recurved, with only a slight depression on the dorsal anterior surface of the scale, the sides parallel for the greater part of its length, broadly in contact with the frontal; prefrontals large, bordering the second labial, widely separated from each other by the rostral; nasal at least partly divided, the anterior portion fused with the first labial; frontal distinctly wider than long (4.7 wide x 4.3 mm. long); supra-ocular somewhat wider posteriorly than anteriorly; a large preocular; two postoculars, the lower very small; parietals 4.1 long x 3.5 mm. wide. 7 upper labials, third and fourth entering orbit; sixth largest, seventh not especially small; temporals 1 + 2; 7 lower labials, three touching first pair of chinshields; second pair of chinshields very small, separated by two scales, and touching two labials; three pairs of small scales separate these from the ventrals.

Scales smooth, in 23 rows about anterior part of neck; 19 two centimeters back of head; at three centimeters, 17 rows which continue to anus; 142 ventrals; anal divided; 38 subcaudals; apical pits present.

Color.—Above nearly uniform olive (olive-brown in alcohol); ventral surfaces yellowish (dirty white in alcohol).

Ficimia publia Cope.

1866. *Ficimia publia* Cope, Proc. Acad. Nat. Sci., Philadelphia, May 1866, p. 126 (Type description; type locality, Mexico [Commission Collection]); Amer. Nat., 1884, p. 163; Günther, Biologia Centrali-Americana, Reptiles and Batrachians, 1893, p. 98.

1894. *Ficimia olivacea* Boulenger (part), Cat. Snakes British Museum, II, 1894, p. 271; Bocourt, Mission Scientifique au Mexique et dans l'Amérique Central, Reptilia, liv. 9, 1883, p. 570, pl. XXXV, fig. 11.

This form is characterized by the presence of internasals. Yellowish or dark brown above, with dark brown transverse spots or bars; sides with dark brown spots; head with symmetrical markings.

Ventrals vary between 138 and 142; subcaudals 36 and 37.

Localities known: Cuernavaca, Morelos; Yucatan.

Ficimia variegata Günther.

1858. *Ficimia variegata* Günther, Cat. Col. Snakes Brit Mus., 1858, p. 7-8 (Type description; type locality, Mexico; M. Salle, Coll.).
1870. ? *Ficimia olivacea* Steindachner, Sitzb. Akad. Wiss., LXI, Abt. 1, May Heft, Jahrg. 1870, p. 19 (Tustla).
1894. *Ficimia olivacea* Boulenger (part), Cat. Snakes British Mus. II, 1894, p. 272.

A specimen of this rare form was collected by Mr. John A. Rickard at Minatitlan, Vera Cruz, July, 1934. It presents the following characters:

Rostral with a sharp recurved edge, the dorsal part with a marked shallow depression; the portion of the scale visible above is much longer than wide (5.1 x 4 mm.) and *distinctly longer than the frontal*; the suture formed with the latter scale is as wide as the rostral at its posterior part; internasals wanting; prefrontals large, widely separated by the rostral, in contact with the second labial; frontal short, slightly broader than long (4.5 x 4.4 mm.); parietals slightly longer than wide (4.7 x 4.5 mm.); nostril between two nasals, the anterior fused with the first labial; one large preocular; an elongate supraocular, wider posteriorly than anteriorly; one very large postocular, seven upper labials, the sixth (and largest) fused with the anterior temporal on the right side but not on left; temporals normally 1+2; third and fourth labials enter orbit.

Seven lower labials, fourth very large, first pair in contact; two pairs of chinshields, the anterior large, touching three labials; the second pair small, separated by one scale, touching a single labial; these separated from first widened ventral by three pairs of small scales and three narrow ventrals; 22 scales on anterior part of neck; 17, 2 centimeters back of head; 17, to one centimeter in front of anus; ventrals 155; anal divided; 34 paired and one conical subcaudal; at least a part of the scales show a very small apical pit. Length 450 mm.; tail 61; width of head 11 mm.; width of body 15 mm.; length of head 11 mm.

Color in formalin.—Above, with a series of dark, irregular blotches, about 32 on body, 9 on tail; intervening areas narrower, of a light tan color, all or part of the scales showing darker and lighter areas; on the sides the bars are broken up into smaller angular spots involving one to three scales, some reaching to edge of ventrals; below dirty whitish; a small dark spot on neck bordering parietals; this connects with two elongate spots on the parietals only partially separated; a light spot on frontal surrounded by black; a black elongate blotch on the rostral; a dark spot below eye; remainder of head light olive-brown.

Remarks.—It seems likely that the *Ficimia olivacea* of Steindachner (*non* Gray) belongs with this form. Although he does not number the dorsal blotches, one judges by the drawing that the blotches are much more numerous than in the present specimen. The Steindachner specimens are from "Tustla" (probably Tuxla Gutierrez, Chiapas).